

# S6065A1003/2001

## LIQUID FLOW SWITCHES

### SPECIFICATION DATA & MOUNTING INSTRUCTIONS

#### FEATURES

- Cost-effective flow switches for HVAC applications.
- High-capacity, fully-encapsulated NC/NO micro-switch.
- A single type suitable for pipes with a diameter of 1 to 8".

#### COMMON SPECIFICATIONS

|                       |   |
|-----------------------|---|
| Switching capacity    | 15 (8) A, 24...250 Vac  |
| Lifetime              | 50000 cycles at nominal load                                    |
| Working temperature   | -40...+85 °C at 90% rel. humidity, non-condensing               |
| Electrical connection | Screw terminal, wire up to 1.5 mm <sup>2</sup> cable Ø 6...9 mm |
| Protection class      | I according to EN60730  |
| Protection standard   | IP65 according to EN60529                                       |
| Housing material      | ABS and corrosion-protected steel                               |
| Accessories           | PA2 Paddle set  |



S6065A2001



S6065A1003

#### GENERAL

The S6065A1003 and S6065A2001 Liquid Flow Switches are designed for monitoring flow rates in pipes employed in HVAC applications. They are suitable for monitoring flow in water, oil, cooling circuits, and lubrication systems. The S6065A2001 is designed for monitoring aggressive liquids.

See Table 1 for the reset and switch points for water. Data for other media must be determined empirically.

#### MOUNTING

The S6065A1003 and S6065A2001 Liquid Flow Switches can be mounted in any desired position far from elbows, valves, and filters.

**NOTE:** The arrow on the housing must point downstream. When using multiple paddles, the paddles must be arranged in order of decreasing length downstream, i.e. with the longest paddle facing the oncoming liquid.

In the case of vertical pipes, reset the range to balance the paddle weight. To prevent malfunction caused by impurities in the medium, do not mount the device with the housing pointing downwards.

#### MODELS

| Specification            | S6065A1003            | S6065A2001        |
|--------------------------|-----------------------|-------------------|
| Flow medium              | non-aggressive liquid | aggressive liquid |
| Mounting                 | Rp 1" (ISO7/1)        | Rp 1" (ISO7/1)    |
| Maximum pipe temperature | 120 °C                | 120 °C            |
| Pressure                 | 11 bar                | 30 bar            |
| Paddle material          | 1.4401                | 1.4401            |
| Lever                    | yellow brass          | 1.4404            |
| Sensor body              | yellow brass          | 1.4404            |
| Housing dimensions       | 113 x 70 x 65 mm      | 108 x 70 x 72 mm  |
| Weight                   | 850 g                 | 850 g             |
| Approvals                | TÜV-approved          | TÜV-approved      |

## SWITCH-POINT ADJUSTMENT

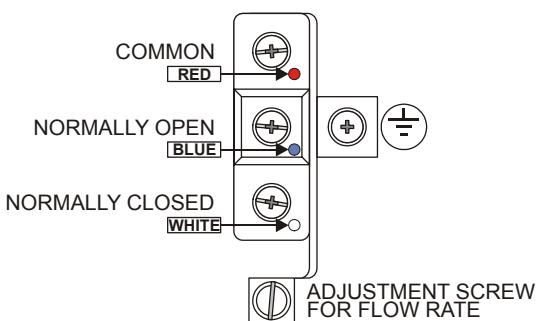
The flow switch is factory-set to the min. flow rate. To adjust the device to other levels, turn the adjustment screw clockwise. Table 1 lists the reset points and switch points for water. Data for other media must be determined empirically.

**Table 1. Reset and switch points for water**

| paddles (L) | pipe Ø | rec. Q <sub>max</sub> (m <sup>3</sup> /h) | reset / switch point          |                               |
|-------------|--------|---|-------------------------------|-------------------------------|
|             |        |   | min. flow (m <sup>3</sup> /h) | max. flow (m <sup>3</sup> /h) |
| 1"          | 1"     | 3.6                                       | 0.6 / 1.0                     | 2.0 / 2.1                     |
| 1"          | 1-1/4" | 6.0                                       | 0.8 / 1.3                     | 2.8 / 3.0                     |
| 1"          | 1-1/2" | 9.0                                       | 1.1 / 1.7                     | 3.7 / 4.0                     |
| 1"+2"       | 2"     | 15.0                                      | 2.2 / 3.1                     | 5.7 / 6.1                     |
| 1"+2"       | 2-1/2" | 24.0                                      | 2.7 / 4.0                     | 6.5 / 7.0                     |
| 1"+2"+3"    | 3"     | 36.0                                      | 4.3 / 6.2                     | 10.7 / 11.4                   |
| 1"+2"+3"    | 4"     | 60.0                                      | 11.4 / 14.7                   | 27.7 / 29.0                   |
| 1"+2"+3"+Z* | 4" Z   | 60.0                                      | 6.1 / 8.0                     | 17.3 / 18.4                   |
| 1"+2"+3"    | 5"     | 94.0                                      | 22.9 / 28.4                   | 53.3 / 55.6                   |
| 1"+2"+3"+Z* | 5" Z   | 94.0                                      | 9.3 / 12.9                    | 25.2 / 26.8                   |
| 1"+2"+3"    | 6"     | 120.0                                     | 35.9 / 43.1                   | 81.7 / 85.1                   |
| 1"+2"+3"+Z* | 6" Z   | 120.0                                     | 12.3 / 16.8                   | 30.6 / 32.7                   |
| 1"+2"+3"    | 8"     | 240.0                                     | 72.6 / 85.1                   | 165.7 / 172.5                 |
| 1"+2"+3"+Z* | 8" Z   | 240.0                                     | 38.6 / 46.5                   | 90.8 / 94.2                   |

\*For models with the suffix "Z," the longest paddle must be used to obtain the values indicated in this table. The Z = 8" paddle must be cut to the proper length to fit into the pipe without touching the inside.

## FIELD WIRING

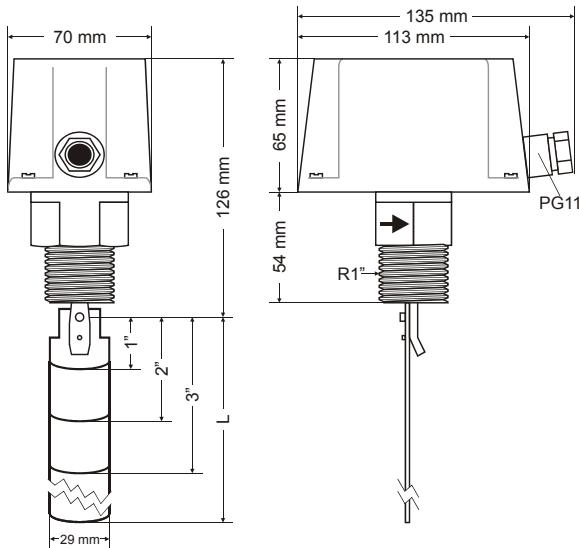


**Fig. 1. Field wiring**

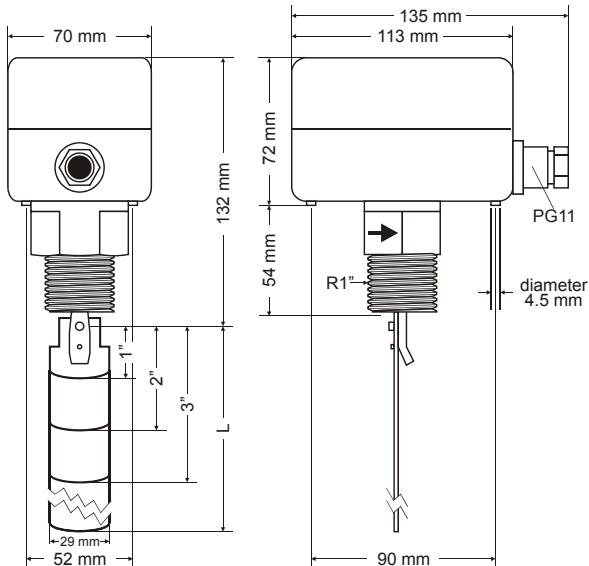
Connect the red and the white contacts. The contact red-white opens when the flow drops below the switch point. When the flow is absent, the contact red-blue closes and can be used as a signal or alarm contact.

**NOTE:** If the flow switch is used as a min. flow controller, another device must be installed downstream for alarm condition activation.

## DIMENSIONS



**Fig. 2. S6065A1003 dimensions**



**Fig. 3. S6065A2001 dimensions**

**Honeywell**

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